

Amendments to the Claims:

1 - 25. (canceled)

26. (new) A printing ink, comprising

a) at least one dye or pigment having at least one absorption maximum in the visible range of the electromagnetic spectrum which is substantially different from the absorption maxima of the base colors of the CIEXYZ system, and

b) at least one other dye or pigment having an absorption band in the visible range of the electromagnetic spectrum whose band width at half intensity is narrower than 2400 cm^{-1} , and

c) at least one other dye or pigment having at least one absorption maximum in the ultraviolet or in the infrared region.

27. (new) A printing ink according to claim 26, wherein the band width at half intensity of said dye or pigment b) is narrower than 2000 cm^{-1} .

28. (new) A printing ink according to claim 26, wherein the band width at half intensity of said dye or pigment b) is narrower than 1500 cm^{-1} .

29. (new) A printing ink according to claim 26, wherein said at least one other dye or pigment c) has at least one absorption maximum in the near-infrared region of the electromagnetic spectrum.

30. (new) A printing ink according to claim 26, comprising at least three different dyes or pigments having absorption spectra which are substantially different from each other.

31. (new) A printing ink according to claim 26, comprising at least four different dyes or pigments having absorption spectra which are substantially different from each other.

32. (new) A printing ink according to claim 26, comprising at least two different dyes or pigments having at least one absorption maximum in the infrared range.

33. (new) A printing ink according to claim 26, comprising at least three different dyes or pigments having at least one absorption maximum in the infrared range.

34. (new) A printing ink according to claim 33, wherein said at least three different dyes or pigments have at least one absorption maximum in the near-infrared range of the electromagnetic spectrum.

35. (new) A printing ink according to claim 26, comprising at least four different dyes or pigments having at least one absorption maximum in the visible range of the electromagnetic spectrum.

36. (new) A printing ink according to claim 26, further comprising a reflecting pigment.

37. (new) A set of printing inks, comprising at least two printing inks according to claim 26.

38. (new) A set of printing inks according to claim 37, comprising at least three of said different printing inks each having a dye or pigment which is different from the dyes or pigments in the other printing inks.

39. (new) A set of printing inks according to claim 37, wherein the different dyes or

pigments have at least one absorption maximum in the visible range of the electromagnetic spectrum.

40. (new) A set of printing inks according to claim 37, wherein at least one printing ink comprises a dye or pigment having at least one absorption maximum in the ultraviolet or in the infrared region.

41. (new) A set of printing inks according to claim 40, wherein said dye or pigment has at least one absorption maximum in the near-infrared region of the electromagnetic spectrum.

42. (new) A set of printing inks according to claim 37, wherein at least one printing ink comprises a reflecting pigment.

43. (new) A method for marking an article, comprising the step of providing on said article a marking which is applied by using at least one member of the group consisting of

- i) a printing ink according to claim 26,
- ii) a set of printing inks each being an ink as recited in i),
- iii) a coating composition comprising at least one printing ink recited in i), and
- iv) a coating composition comprising a set of printing inks as recited in ii).

44. (new) A method according to claim 43, wherein said article is selected from the group consisting of a banknote, a document, a ticket, a foil, a thread, a label, a card, and a commercial good.

45. (new) A method according to claim 43, wherein said at least one coating composition is selected from the group consisting of

- i) pasty inks comprising intaglio inks, letterpress inks, and offset inks,

- ii) liquid inks comprising screen printing inks, helio-flexo inks, and gravure inks,
- iii) toners for electrostatic or electrophoretic printing, and
- iv) ink-jet inks comprising drop-on-demand ink-jet inks and continuous ink-jet inks.

46. (new) A method of authenticating an article, comprising the steps of:

- a) measuring an absorbance, reflectance or transmittance spectrum of an article marked by the method according to claim 43, in at least one domain of the electromagnetic spectrum selected from the group consisting of the UV, visible and IR wavelength domain;
- b) comparing the spectrum measured under a) and/or information derived therefrom with a corresponding spectrum of an authentic item and/or information derived therefrom.

47. (new) A method according to claim 46, wherein said article is selected from the group consisting of a banknote, a document, a ticket, a foil, a thread, a label, a card, and a commercial good.

48. (new) A method according to claim 46, wherein said method is carried out by a machine.

49. (new) A method according to claim 48, wherein said machine is selected from the group consisting of a currency acceptor, a ticket validator, and a hand-held authentication device.

50. (new) A method according to claim 46, wherein in step a) said spectrum is measured as a vector of digital values representing the absorption and/or reflection and/or transmission of said marking at a selected number of wavelengths or over a

selected number of wavelength domains.

51. (new) A method according to claim 46, wherein step b) is carried out by deriving the statistically independent hyper-color coordinates of said marking from the vector of digital values measured in step a), and comparing at least one of said hyper-color coordinates with a corresponding reference value of an authentic item, and deriving an authenticity indicator from the comparison result using a pre-established decision criterion.

52. (new) A method for authenticating an article according to claim 46, wherein said spectrum is measured using a combination of devices selected from the group consisting of a combination of a broad-band emitting light source and a plurality of narrow-band sensitive photodetectors, a combination of a broad-band sensitive photodetector and a plurality of narrow-band emitting light sources, and a combination of a broad-band emitting light source and a diffractive or dispersive spectrometer device.

53. (new) A method for authenticating an article according to claim 46, wherein said spectrum is measured using a combination of a plurality of narrow-band emitting light sources and a broad-band sensitive imaging device, yielding spectral or hyperspectral imaging information.

54. (new) A method according to claim 53, wherein said narrow-band emitting light sources are LEDs.

55. (new) A method according to claim 53, wherein said broad-band sensitive imaging device is a CCD- or CMOS- camera.

56. (new) A method for authenticating an article according to claim 46, wherein said

statistically independent hyper-color coordinates are derived from the measured spectrum by the means of a mathematical Least-Squares algorithm.

57. (new) A marking comprising at least one printing ink according to claim 26.

58. (new) A marking comprising at least one set of printing inks according to claim 35.

59. (new) An article comprising at least one marking according to claim 57.

60. (new) An article according to claim 59, wherein said article is selected from the group consisting of a banknote, a document, a ticket, a foil, a thread, a label, a card, and a commercial good.